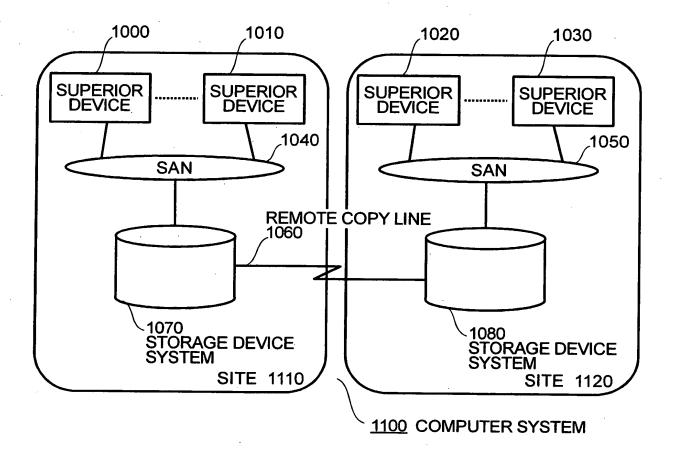
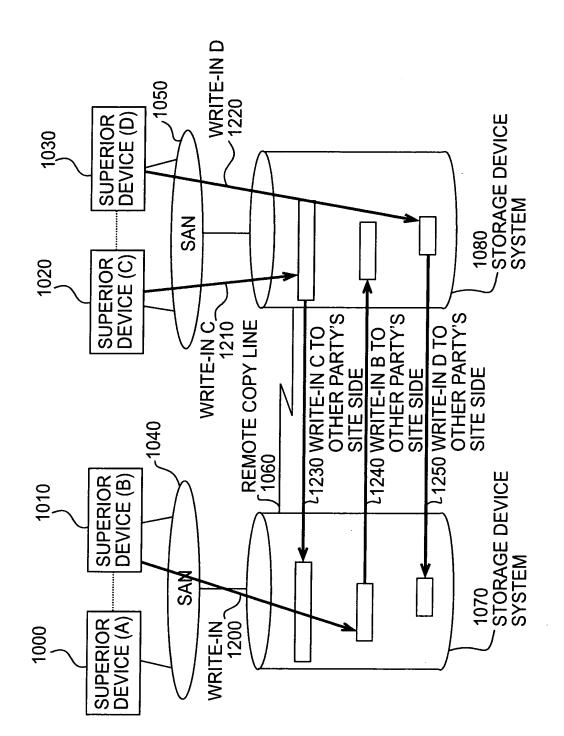


FIG.1

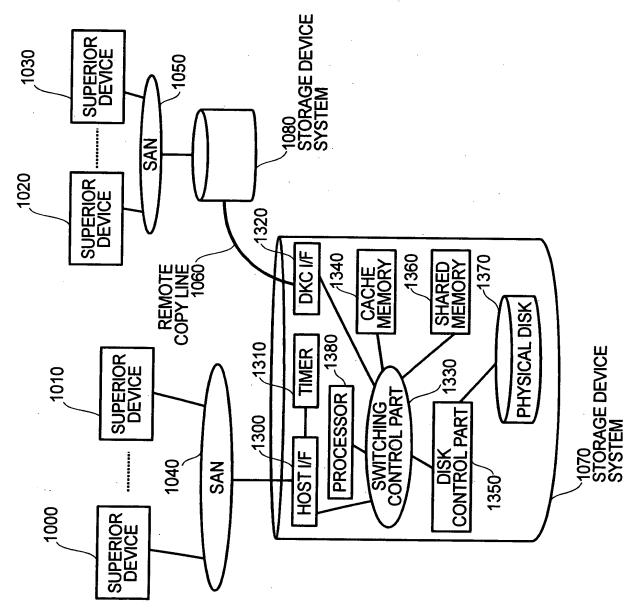


**FIG.2** 

47



**FIG.3** 



'1080 STORAGE DEVICE SYSTEM DATA CONSISTENCY HOLDING CONTROL PART **DISK CONTROL UNIT** SUPERIOR DEVICE HOST I/F 1030 2040 -2030 MAIN CONTROL PART **BIT MAP** 2020 1350 1300 SAN 1020 DKC I/F SUPERIOR DEVICE 2050 CACHE PART 1320 1050 PHYSICAL DISK 1370 **FIG.4** 1370 PHYSICAL DISK 2020 1040 CACHE PART SUPERIOR DEVICE ~2050 1320 1070 STORAGE DEVICE SYSTEM 1010 MAIN CONTROL PART DKC IF -2030 2040 1350 SAN **DISK CONTROL UNIT** 1300 **BIT MAP** DATA CONSISTENCY HOLDING CONTROL PART 9 SUPERIOR DEVICE HOST I/F

	,107		T!	Ţį	Ţį	Ti	Τ
	\	CACHE DATA STORAGE ADDRESS					
	106	STORAGE SERIAL NUMBER					
	105	OBJECT SIZE					
ENCY HOLDING TABLE	10 <b>4</b>	OBJECT BLOCK START ADDRESS					
	103	TION SUPERIOR DEVICE OBJECT OB					
	102	RECEPTION TIME	00:00:00	00:01:30	00:01:40	00:03:10	
	1	TABLE CONTROL NUMBER	1	2	3	 100	<u></u>

2030 BIT MAP TABLE

											LE		
	0	-	0	0	_	0	0	0	-	0	200 TEMPORARY BIT MAP TABI	0	
	<u>-</u>	<del>ر</del>	_	0	<u>-</u>	0	0	0	1	0	T MA	0	
	0	_	-	0	_	0	0	0	1	0	Y BI	0	
	_	0	_	0	_	0	0	0	1	0	)RAF	0	
	_	0	1	0	0	0.	0	1	1	0	MPC	-	
	0	0	1	0	0	0	0	1	0	0	00 TE	1	
	0	0	1	0	0	0	0	11	0	0	720	1	
	0	0	1	0	0	0	0		0	0	4		>
	0	0	1	0	0	0	0		P	0			!
J	7	<b>-</b>	_	0	0	0	0	1	V	0		Z	
								• •		M		,	

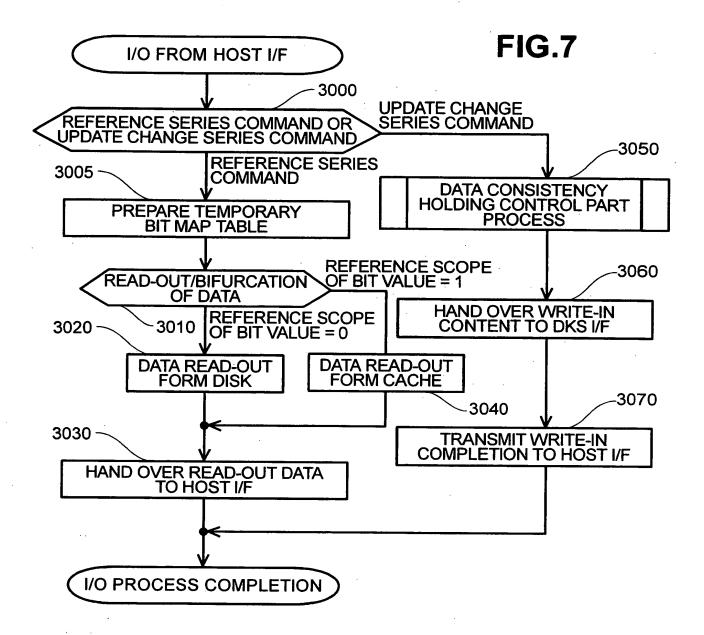
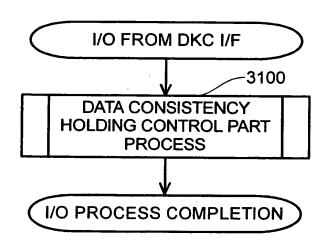
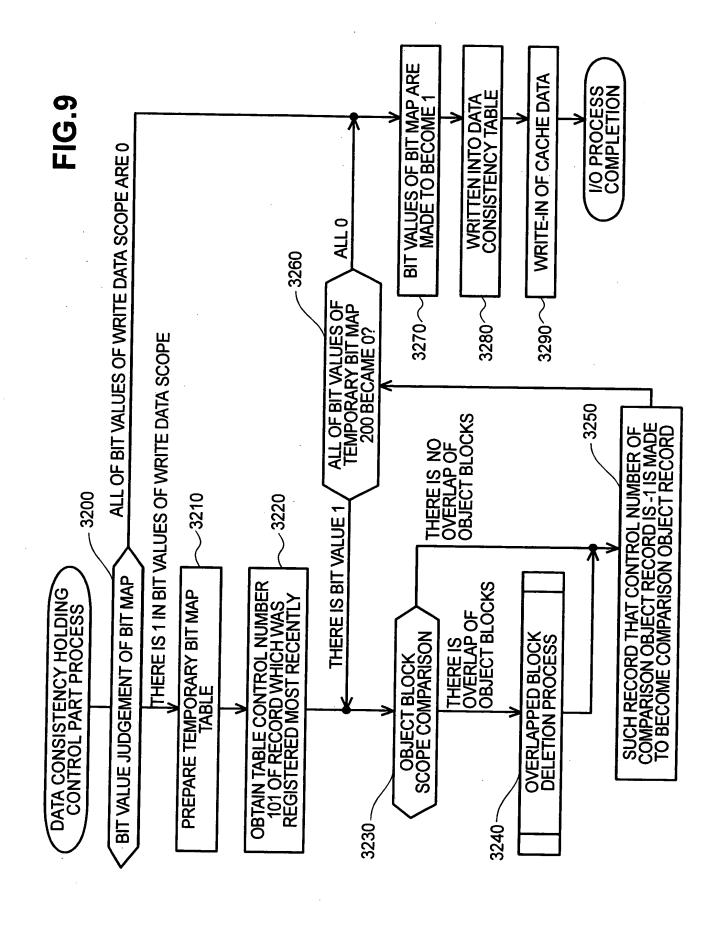
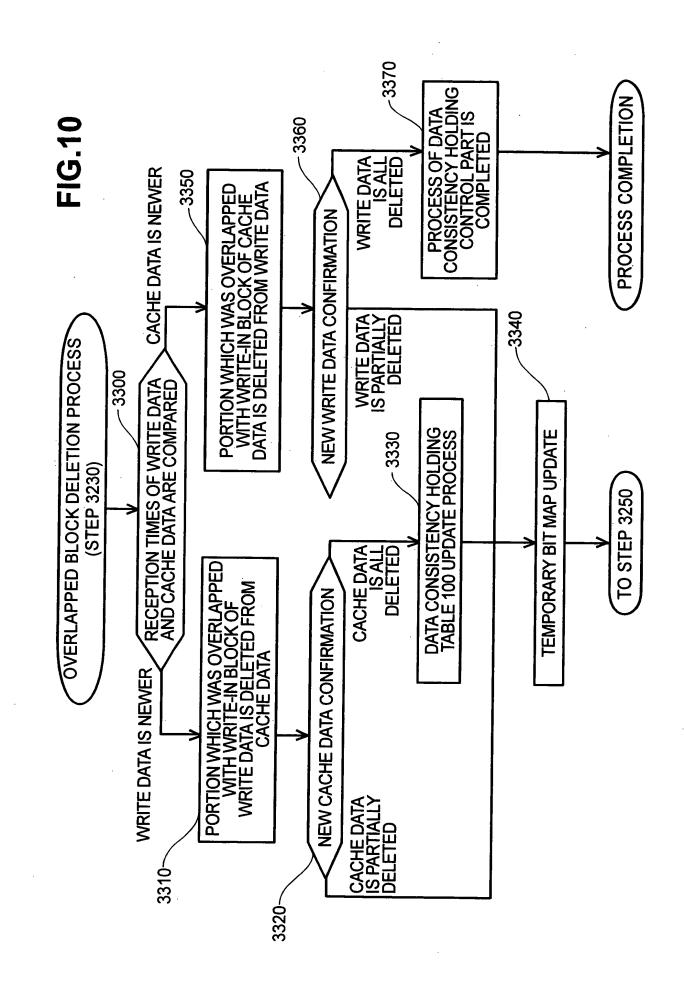


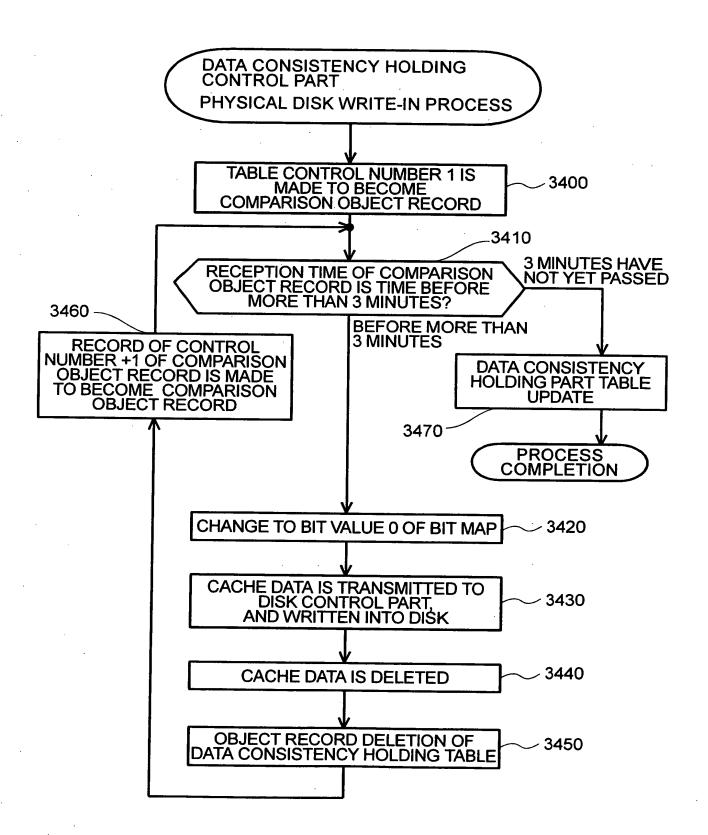
FIG.8







**FIG.11** 



1080 STORAGE DEVICE SYSTEM DATA CONSISTENCY HOLDING CONTROL PART SUPERIOR 1030 HOST I/F DISK CONTROI PART BIT MAP 1350 \4020 MAIN CONTROL PART 4030 1300 SAN EXCLUSIVE CONTROL PART 1020 DKC IF SUPERIOR 2050 CACHE PART 1320 1050 REMOTE COPY LINE 1060 1370 PHYSICAL DISK PHYSICAL DISK 1370 4000 -4000 4030 1040 CACHE PART SUPERIOR DEVICE 2050 1320 EXCLUSIVE CONTROL PART 1010 \*1070 STORAGE DEVICE SYSTEM MAIN CONTROL PART DKC |F 1350 DATA CONSISTENCY HOLDING CONTROL PART ........... SAN 1300 DISK CONTROL PART 4010 100 SUPERIOR DEVICE BIT MAP 4020 HOST I/F

4010

**FIG.12** 

## **FIG.13**

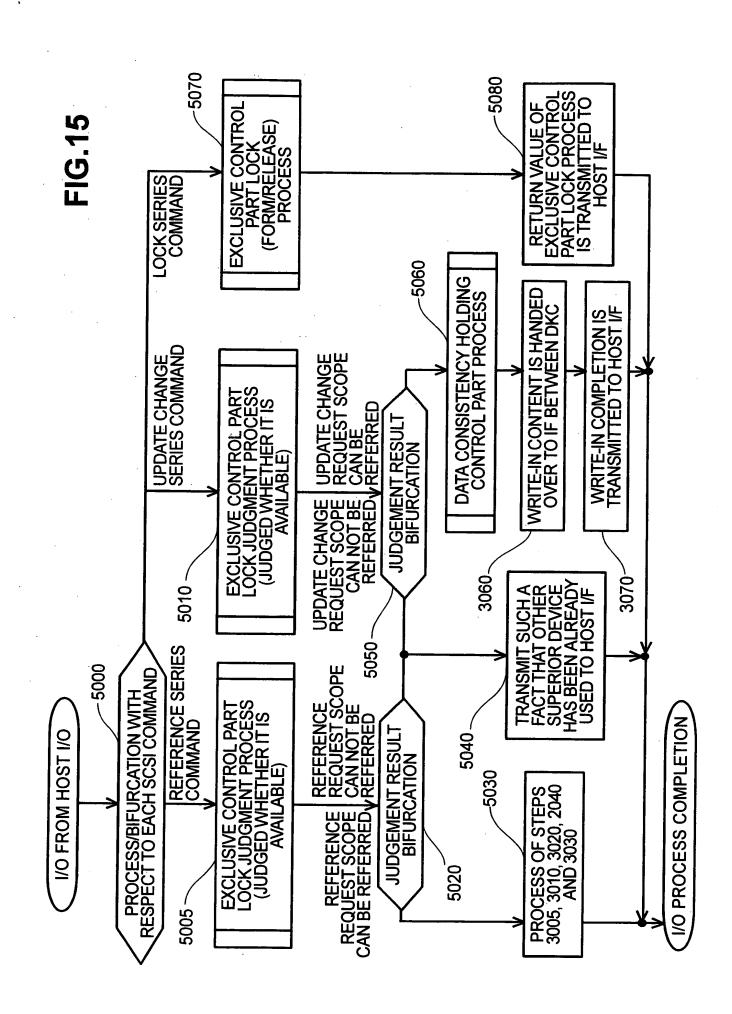
## 300 BIT MAP VALUE TABLE

BIT VALUE	EXPLANATION
0	DISK IS NOT RESERVED DISK IS IN THE MOST RECENT STATE
1	DISK IS NOT RESERVED DATA WHICH IS NOT UPDATED IN DISK EXISTS ON CACHE
2	DISK IS RESERVED IN A CERTAIN SUPERIOR DEVICE, DISK IS IN THE MOST RECENT STATE
3	DISK IS RESERVED IN A CERTAIN SUPERIOR DEVICE, DATA WHICH IS NOT UPDATED IN DISK EXISTS ON CACHE

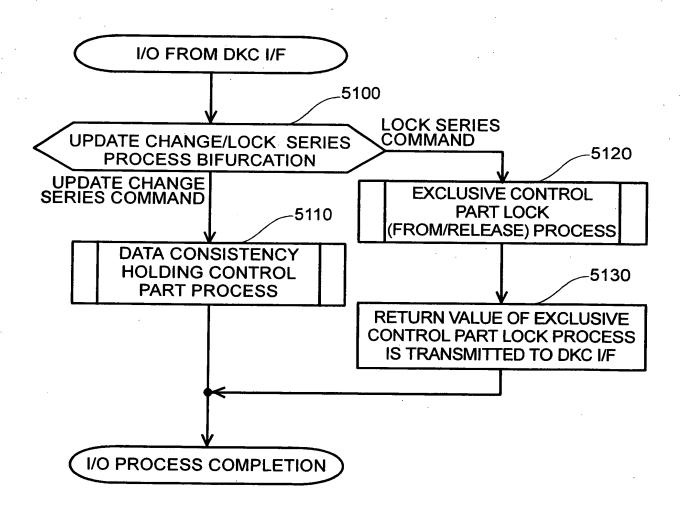
## **FIG.14**

## 400 LOCK STATE HOLDING TABLE

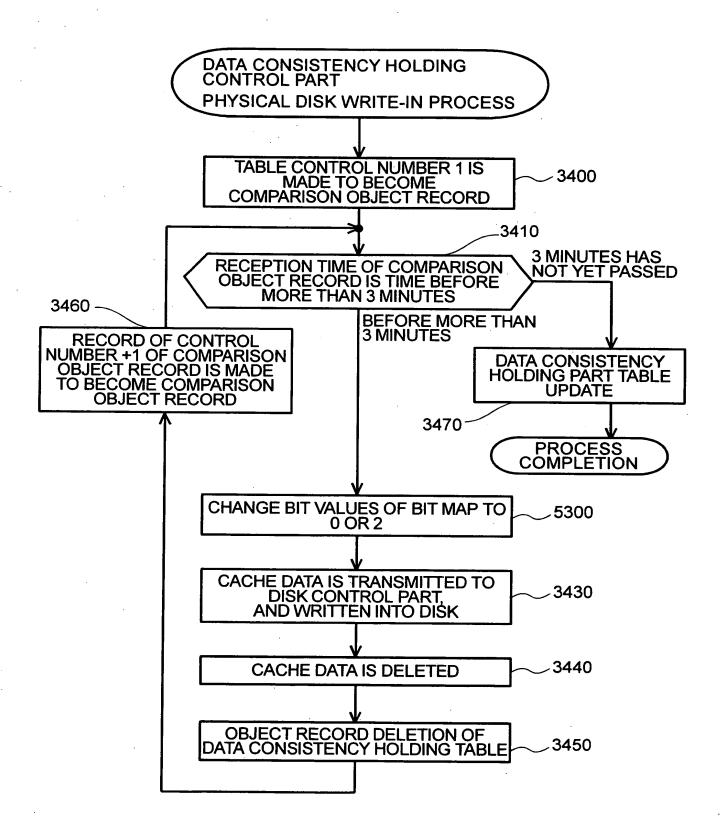
401	402	403	404	405
CONTROL NUMBER	LOCK START TIME	SUPERIOR DEVICE IDENTIFICATION NUMBER	LOCK OBJECT START ADDRESS	LOCK OBJECT SIZE
			·	

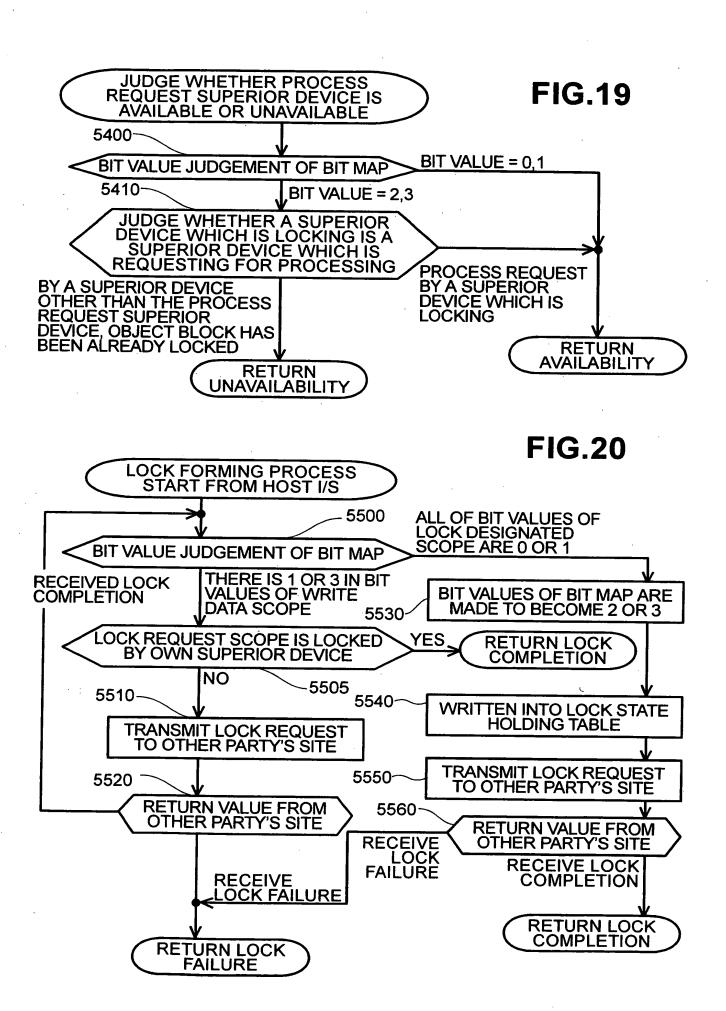


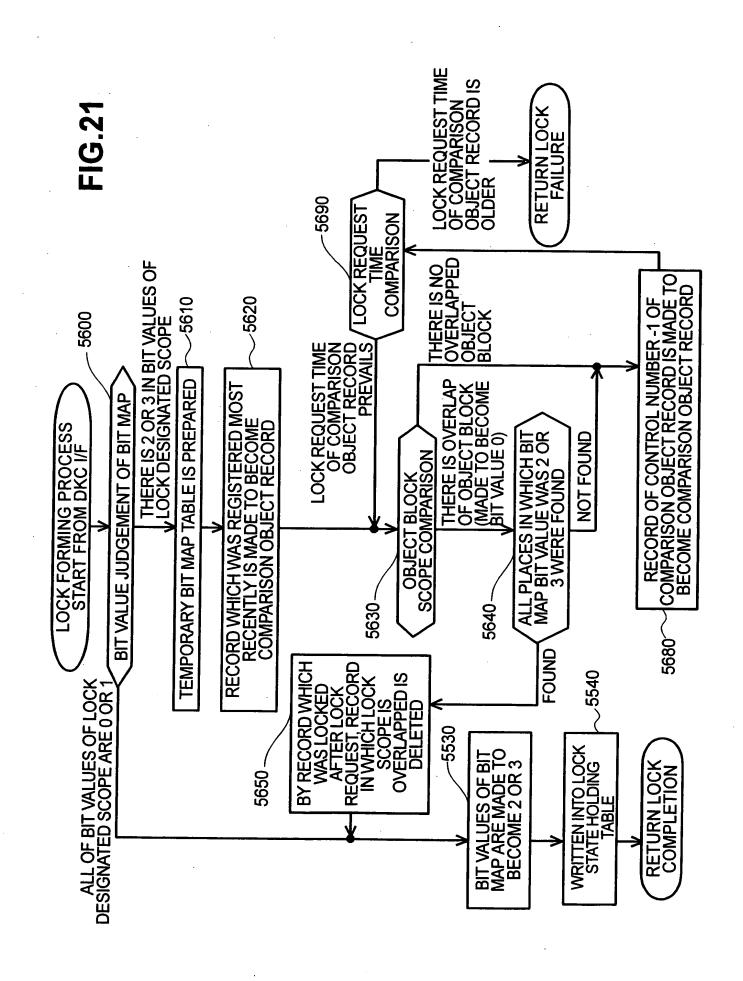
**FIG.16** 



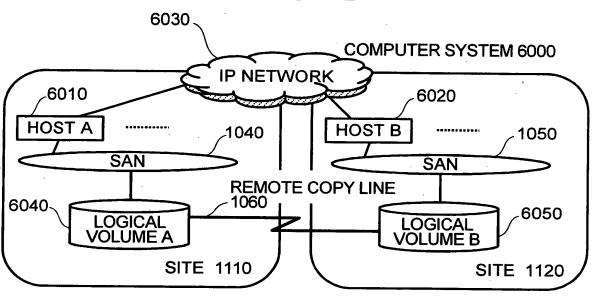
**FIG.18** 

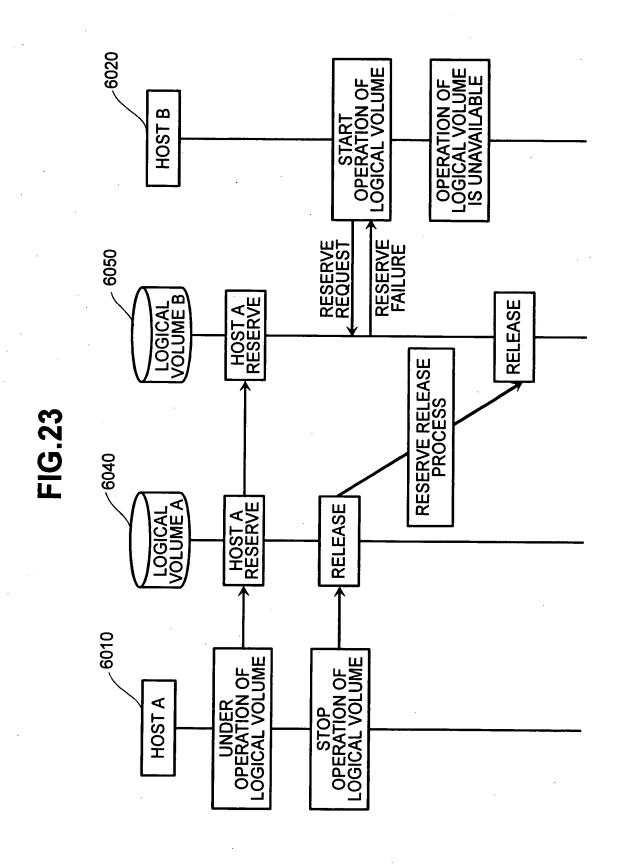




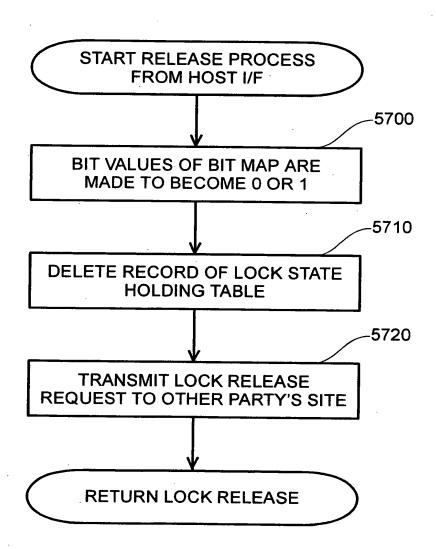


**FIG.22** 





**FIG.24** 



**FIG.25** 

